



Disclaimer:

This document was not produced by DEQ. Some of its content may not be in an accessible format pursuant to Section 508 of the federal Rehabilitation Act of 1973, as amended (29 U.S.C. § 794 (d)). Please call 800-592-5482 if you need assistance.

Union Hill Community Household Study Site and Methods Report

A Community Participatory Action Research Project
Part II: Households: Demographics, Health, Land Use, Family Heritage

Lakshmi Fjord, Ph.D.
Department of Anthropology, University of Virginia



Abstract: The site choice made by Dominion Energy for the Virginia Atlantic Coast Pipeline as impetus for this study is examined in comparison with first purchased site in Buckingham 1.9 miles southwest. The erasures of their differences, in information sent to FERC for DEIS and in later information-gathering queries by local and state officials, is reported. Site choice in Union Hill became the basis for the research designed and implemented by the author for a community participatory action research (CPAR) project to uncover key unknown demographic data, health conditions, use of land for agricultural and domestic food production, and family heritage. Prior to this study, the author had undertaken historic research on this site to apply for and receive in 2016 “Most Endangered Historic Place in Virginia” listing by Preservation Virginia, on the basis of its former slave and freedmen history for Union Hill/Woods Corner Rural Historic District.

The effectiveness of a CPAR approach to ensure highest levels of participation within pressures of time are described, as are the adherence of the project to NIH protocols for confidentiality and ethical standards of anthropological fieldwork. The legal precedence and history of this approach in anthropology are briefly noted.

The Siting of ACP's Virginia Compressor Station From Two Choices in Buckingham

On August 20, 2015, Atlantic Coast Pipeline-ACP LLC bought 68.5 acres from Variety Shade LLC on Virginia State Route 56 in western Buckingham County for \$2.5 million for their then 41,000 hp Virginia compressor station. This site fit a key piece in Dominion Energy's business plan -- to intersect at this compressor station with the existing 4-pipeline Transco Corridor. Bidirectional flow controlled here would get ACP gas to export at Cove Point, MD, an LNG facility Dominion already owned. At \$36,496 per acre where land was selling for less than \$3,000, this sale set in motion a process of social upheaval to the people living closely on all sides that continues to the present.

Friends of Buckingham had formed in 2014 when friends in Nelson let us know about the ACP pipeline plan and its route from NW to SE corner of Buckingham County. The first site proposed for the ACP Virginia compressor station was on the Nelson County side of Wingina that, like all historic districts on the James River and of Monacan settlement before English colonization, lay on both sides of the James River, the main transportation highway.

Later, we would surmise that the Wingina site had served to fulfill the requirement that ACP explore "alternatives" in their original application to FERC in September 2015. Yet, Dominion did not purchase land there, as it would not have been built, even without the clear problem of destroying an American Indian historic site excavated there. This intersection of the Tye and James Rivers routinely seasonally floods but, more importantly, does not contain a 150 ft. Transco right-of-way easement.

Reporting on the sale, Jordan Miles interviewed Kenda Hanuman of Yogaville, co-Chair of Friends of Buckingham, "who expressed surprise at the small size of the parcel. 'We're obviously distressed about the fact that it is in such close proximity to two churches, Union Hill and Union Grove. That will have an enormous impact on their ability to have their church there,' she said."¹

Her point about size was well taken, as was her concern for close historic black churches and congregations. Prior to this purchase, in June of 2015, ACP LLC had bought 147 acres not far to the west of this parcel also with an existing Transco right-of-way, for \$225,000 from KWP, LLC.² This far larger parcel is not on a main state-maintained route but on a gravel road, is in a sparsely populated area that is almost entirely white, and where there are no churches in the immediate vicinity.



[Map of ACP's 147-acre parcel (which does not show existing Transco ROW) is west of the 68.5 acres ACP's chose for CS 2, Farmville Herald, Aug. 25, 2015]

¹ Farmville Herald, August. 26, 2015: <https://www.farmvilleherald.com/2015/08/property-for-compressor-station->

² Farmville Herald, July 20: 2015: <https://www.farmvilleherald.com/2015/07/potential-compressor-station-property-purchased-by-pipeline-venture/>

Because assessment and evidence of site suitability for ACP’s Virginia compressor station are the bases for the Union Hill Community Study, Part I and II, and its findings of environmental injustice, I examine how a “good enough to be bought” site for the compressor station disappeared from public information over time. Choosing from two possible sites close together and already purchased, Dominion chose the site that is visibly to the naked eye far more populated and majority African American on the main 2-lane north/south state route in western Buckingham.

Dominion may have early recognized that the larger size, fewer people, less disruption to county-wide traffic, and white majority made the 147-acre “Midland Road” parcel a more check off the boxes easier choice in permit decisions. From the day of purchase of the Union Hill parcel onward to FERC approval on October 13, 2017, Dominion began a process of “rendering sameness” between these two sites by leaving out key factors of those size, demographic, and road impacts differences in information given to FERC, Buckingham officials, and DEQ.

This FERC FEIS (Final Environmental Impact Study) Table 3.6.1.1, P. 358: Comparison of Proposed Site and Midland Road Alternative for Compressor Station 2, lists the features of comparison. FERC staff describe their comparative thinking, “The environmental impacts between the proposed site and the Midland Road Alternate site are similar; however, the alternative site would require additional pipeline and would increase the construction footprint of ACP. Further, our analysis in sections 4.9.9.1 and 4.11.1.3 concludes that operation of the compressor stations would not cause or contribute to a violation of the federal air quality standards; therefore, we do not believe health would be adversely affected or that the alternative site would be necessary for reasons of air quality or public health.”³

The similarities of the sites do seem remarkable—with a major caveat. No size comparison is included that would foreground that the 68.5-acre site is less than one-half the size of the Midland Road’s 147 acres. Same-size impacts on water resources and losses of farmland then become disproportionate in relation to their wholes. Disproportionate water resource and farmland losses would then be part of assessment of impacts to their share A1 Agricultural Zone designed to protect farmlands.

TABLE 3.6.1-1 Comparison of Proposed Site and Midland Road Alternative Site for Compressor Station 2			
Features	Unit	Proposed Site	Midland Road Site Alternative
Permanent easement	acres	12.9	13.1
Temporary construction workspace	acres	56.0	55.8
Additional miles of AP-1 mainline required	miles	0.0	1.1
Conservation easements	acres	0.0	0.0
Forested lands – Permanent	acres	12.8	10.6
Forested lands – Temporary	acres	36.1	38.8
Wetlands (NWI) – Permanent	acres	0.0	0.0
Wetlands (NWI) – Temporary	acres	0.0	0.0
Intermittent waterbodies	number	1	0
Perennial waterbodies	number	0	0
Prime Farmland – Permanent	acres	11.5	3.6
Prime Farmland – Temporary	acres	26.7	30.1
Noise Sensitive Areas (NSA) within 0.5 mile	number	9	10

³ FEIS, 7-17-17: 3.6.1.3 ACP Compressor Station 2, P. 3-58.

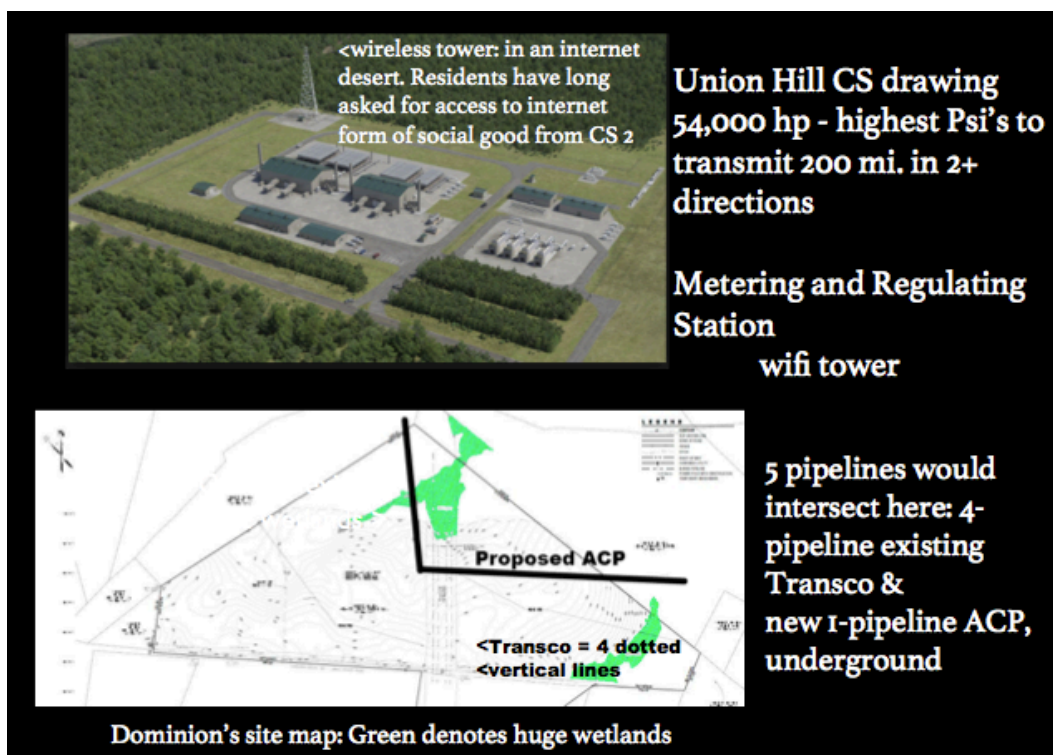
FERC accepted Dominion's "proposed site" based on Midland Road's minute and hardly fixed extra .02-acre of temporary construction area and 1 mile of pipeline. Lacking the information on either parcel size, FERC fails to consider the benefits to site suitability of Midland Road's 200% larger parcel size.

Key is that the only source of site information used by FERC is that asked for and provided by the applicant. Not included are the local public comments in the DEIS comment record made by local farmers and residents about the Union Hill site choice. These describe the close proximity of this new pollution source infrastructure to their farming operations, homes, and churches, and single drinking water source individual wells – made more impactful by what they did not know – that it is ½ the size of the Midlands Road alternative.

Extending the ramifications of their site approval, FERC notes its linkage to other key information about the site located in sections 4.9.9.1 "Environmental Justice" and 4. 11.1.3 "Air Quality" reviews. Each of which are based on FERC's use of Dominion's submitted demographic analysis of the proposed site in Union Hill. Its basis is a 2010 census tract number that is the average for the whole of Buckingham County – 29.6 persons per square mile.

In the absence of information about the far larger site and rejection of the Community Study demographic findings submitted to FERC in public comments by the author and Southern Environmental Law Center, FERC approved a now larger, 54,000 hp compressor station and metering and regulatory station co-sited on the parcel less than one-half the size of the available alternative.

Below is the Dominion-provided CS 2 site plan given to the Buckingham Community Advisory Committee in 2015, with notes provided by the author used in power-point presentations.



DEQ's Head of Air Division, Mike Dowd, argues that site suitability investigations rest entirely with local government. Yet, the problem is that not only FERC and DEQ but also local Buckingham elected officials and Planning Commissioners rely heavily on Dominion-generated information in key permit decision-making. I offer just two of the frequent examples of incorrect information about the ACP or the site given by Dominion spokespersons that influences decision-making. First is at the Buckingham Planning Commission public hearing, Sept. 26, 2016, to recommend or not the special use permit exemption required to site the Union Hill compressor station in an A1 Agricultural Zone. Mr. Picard of Dominion does not correct Commissioner Maxey's misunderstanding that the ACP pipeline was already in the ground (thus inevitable). Picard appears to confirm what the county government and most Buckingham people thought to be the case even if ACP was not "already in": no local government or citizens can stop the ACP because the federal government "wants it."

Maxey: We got this [special use exemption permit application] a month ago. It's the first time I've seen it. Hadn't seen anything on the pipeline. Everybody says it's in [ACP already built]. I mean who decided the pipeline went? Did it go before the Board of Supervisors?

Picard: It's an interstate pipeline, which is why it falls under federal jurisdiction" (215).

Or this:

Commissioner Gormus to Mr. Picard: How often does the blowdown occur?

Picard: Well...

Mrs. Gormus: Is it sporadic?

Picard: It would be very sporadic. From time to time we may schedule maintenance activity that requires venting. We would let the County and we could let our neighbors know about that. There are plenty of ways we can notify folks know about planned events. Unplanned events would be very sporadic, rare.

Mrs. Gormus: Nosebleeds and nausea, rashes, headaches and widespread breast cancer, tell me about that. Does the compressor station cause any of those things?

Picard: Do any of you gentlemen suffer from any of those illnesses?" (Ibid: 216).

Except, Dominion has filed for over 100 blow-down events each year in their CS 2 air permit, which does not provide community notification of blow-down events -- despite years of community requests. Mr. Picard does not answer the health question at all and instead uses gender to stop questioning, which indeed occurred. Mrs. Gormus was referring to independent scientific health studies of communities living near compressor stations submitted by Barb Gottlieb, Director of Health and Environment for Physicians for Social Responsibility the week prior to this meeting.⁴

On Nov. 9, 2018, in response to State Air Pollution Control Board Chair Langford's question about alternative sites, Mr. Gamble, Dominion spokesperson, place on FERC all responsibility for choosing the Union Hill site:

We submitted [alternatives] information to FERC. FERC analyzes it, and they go through a process of submitting data requests to us, asking for more information, and then they summarized that analysis in their environmental impact statement ... Through that

⁴ Buckingham Planning Commission Minutes, Sept. 26, 2016, Special Use Permit Exemption Hearing: P. 215- 216.
<http://www.buckinghamcountyva.org/Planning%20Commission%20Minutes/2016%20PC%20Minutes/PC%20Minutes%209-26-16.pdf>

environmental impact statement, they determined that the Buckingham Compressor Station, where sited, was the preferable option, preferable alternative” (DEQ transcript: 124).⁵

Air Board Member Bleicher sought more specifics in a follow up query of Mr. Gamble, “Is this the only place you can put it? Are there advantages to this location for you?”

Mr. Gangle: “One of the customer needs on this project was to be able to connect to the existing Transco pipeline. Where our facility is located is actually where the Transco pipeline -- we intersect at the proposed facility” (DEQ transcript: 126).

And so does their Midlands Road site, which Mr. Gamble probably doesn’t know about.

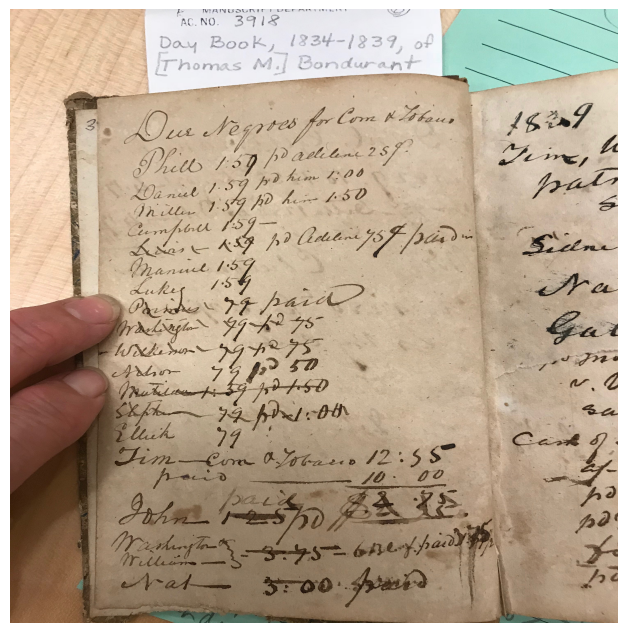
⁵ Transcript Day 2, SAPCB public hearing: 1-Air_Pollution_Control_Board_Mtg_Day_2.pdf. Received from Ann Regn, Communications Division, Dept. of Environmental Quality, P. 124 [Nov. 9, 2018]

Community Participatory Action Research in Union Hill

Historic Context of Research Site

In response to the absence of any archaeological or architectural historic cultural resource reports submitted for the Union Hill site in particular and most of Buckingham County in general in relation to the hundreds of pages for other ACP-impacted counties, the author undertook a site-specific historic research project under duress of time and lack of existing Union Hill-specific records. This research is briefly noted to place in the context of culture, place, and history the circumstances of fieldwork, which they shape.

Thomas Jefferson designed the Buckingham Courthouse burned to the ground by arson on February 26, 1869 in a place of 2:1 majority slaves prior to the surrender at Appomattox, and former slaves who bought their freedom had to leave the county. Buckingham slave owners led the back to Africa – Liberia movement out of fear of free “coloreds” and slaves. Destroyed were records of enslavement -- wills with lists of inherited slave names, records of purchase of freedom from former owners, freedmen land purchased – useful for suits for restitution. The arson occurred the night the U.S. Congress passed the 15th amendment giving former slaves the right to vote. Mr. Charles White’s book, *The Hidden and Forgotten: Contributions of Buckingham Blacks to American History*, he reports that former slave owners gave land to their free slaves in hopes they would look on them kindly.⁶



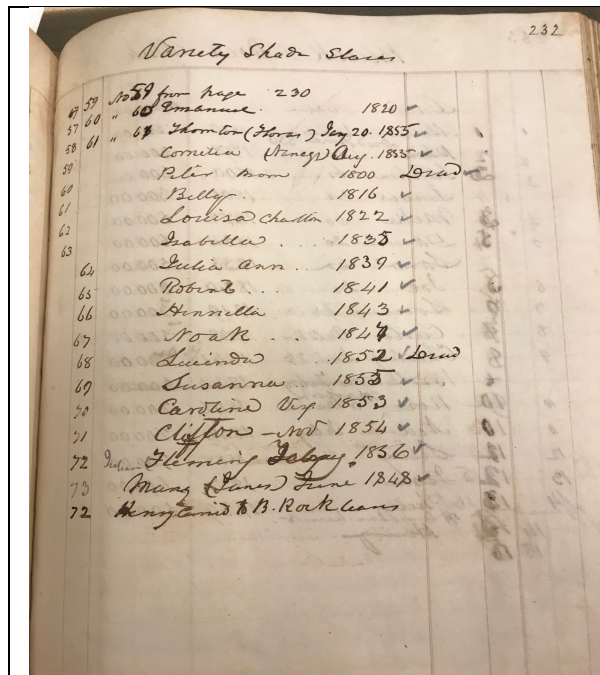
University of Virginia, Special Collections, *Thomas M. Bondurant Day Book*, 1834-1839, No: 3918 [may not publish without family permission; copied for educational purposes only]. Variety Shade plantation slaves receive payment for corn and tobacco they grow, the means to purchase their freedom.

Mr. White’s painstaking 25 years of research to find alternate historic records of African American people living in Buckingham is not site-specific. Nothing could point to a Union Hill history to use as evidence for the Union Hill/Woods Corner Rural Historic District for Preservation Virginia “Most

⁶ White, Charles. 1985. *The Hidden and Forgotten: Contributions of Buckingham Blacks to American History*. Walsworth Press, Marceline, Missouri.

Endangered Historic Place in Virginia” listing or eventual Virginia Department of Historic Preservation eligibility. To give a glimpse of the evidence needed to find one kinship link between the people now living in the “impact area” of CS 2 now and their history, I offer two images.

On Shelton Store Road, the remains of Shelton Store, built by Flemming Shelton, son of Dicey Haskins, former slave at one of the Bondurant family network of plantations, of which Variety Shade is one. Variety Shade Landowners group sold 68.5 acres to ACP for CS 2.



Variety Shade Slaves
Page 232, Line 72

Fleming b.1836

University of Virginia, Special Collections, *Thomas M. Bondurant Farm ledger*. May not be published without permission of the family.

[Needs correct citation; copied for educational uses only]

Union Hill Household Study

The impetus to undertake a door-to-door household study in Union Hill as a community participatory action research project was to use best anthropological practices to find out key demographic information to “populate the site” of ACP’s Virginia compressor station – CS 2. Because

Dominion's 2015 ACP application to FERC (and all submissions going forward) used the average 2010 census tract data for the whole county of Buckingham or 29.6 people, all of the visibly close by households on all sides of the CS 2 site were lost to decision-makers. No NEPA EJ review would be triggered, no existing health impacts would be considered, no majority African American "pocket" in a census tract would be made known, no vulnerable elderly or children would be part of assessments, no economic impacts, and no legacy of slavery in place would be considered – as part of site suitability assessments.

Each of these concerns relates to a different sort of accurate information about the people living near the CS 2 site. Each sort of accurate information relates to giving evidence within the permitting process; a set of decisions made in the regulatory process required when seeking to build new sources of toxic pollution to uncover as exactly as possible their environmental impacts – first on the people living closest by, and then on climate change goals.

Why NEPA Guidelines Caution Against Use of Census Tracts for Demographic Accuracy

Demographics play a significant role in every aspect of compressor station site decision-making, whether about site suitability or construction decisions about materials and shut off value distances or about whether or not to institute tighter safety and security measures, and perhaps most importantly, how significant the "community engagement" has been with the people living in the "impact area."

The National Environmental Policy Act – NEPA Guidelines are quite clear on why it is important not to engage in census tract only bases for environmental justice reviews to identify if a project will disproportionately impact a majority minority population living in the 1-mile impact radius. Because both Dominion and DEQ contend that census tract data is enough to "screen for" environmental justice, I ask the reader's patience for EPA's own descriptive language to the contrary:

Under the National Environmental Policy Act (NEPA),
"Each Federal agency should analyze the environmental effects, including human health, economic, and social effects of Federal actions, including effects on minority populations, low-income populations, and Indian tribes. Agencies should consider the composition of the affected area to determine whether there may be disproportionately high and adverse human health or environmental effects on these populations. And recognize the interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed action. Agencies should develop effective public participation strategies.

"Agencies should identify a geographic scale for which they will obtain demographic information on the potential impact area. Agencies may use demographic data available from the Bureau of the Census ... [However] The fact that census data can only be disaggregated to certain prescribed levels (e.g., census tracts, census blocks) suggests that pockets of minority or low-income communities, including those that may be experiencing disproportionately high and adverse effects, may be missed in a traditional census tract-based analysis.

"Caution is called for in using census data due to the possibility of distortion of population breakdowns ... In addition to identifying the proportion of the population of individual census tracts that are composed of minority individuals, analysts should attempt to identify whether high concentration" pockets" of minority populations are evidenced in specific geographic areas ... The

IWG guidance also advises agencies not to ‘artificially dilute or inflate’ the affected minority population ...

“The EPA NEPA analyst should look at each situation on a case-by-case basis ...

EPA analysts must consider the cumulative effects on a community by addressing the full range of consequences of a proposed action as well as other environmental stresses which may be affecting the community” (20) [and] Health data reflective of the community” (21).

For the purposes of comparing and contrasting the demographic methods used by Dominion, FERC, and DEQ and Fjord’s Community Household Study, NEPA guidelines issue this caveat: “it should be noted that census data have been shown to be unreliable in some cases, in part because the level of aggregation may not offer a fine enough mesh to identify the existence of such communities. Also, census data are based on self-reporting. These data are not always consistent and are prone to undercounting minority populations and low-income populations due to a perceived reluctance for certain populations to divulge information (see Section 2.1.1)” (35).⁷

FERC’s FEIS (July 17, 2017) acknowledges the public comments voicing concerns about Union Hill’s population and environmental justice status: “We received numerous comments on the draft EIS expressing concern about minority and low-income communities near the proposed Compressor Station 2 in Buckingham County, Virginia.” Included in those comments were my findings from the Union Hill Community Household Study on population size, majority African American race, age range that skews both to the most elderly and the very young, and former slave family heritage at the CS 2 “impact area.” Southern Environmental Law Center verified those findings and also submitted them as part of their ACP DEIS comments.

Yet, FERC chose to disregard that demographic evidence from the Union Hill Study, in which door-to-door, we reached 76% of the 99 households in a 1.1-mile radius. Against NEPA guidelines, FERC came to the conclusion that

“[T]he proposed Compressor Station 2 would be within a census tract that is designated a low-income environmental justice population. The two other census tracts within 1 mile of the proposed Compressor Station 2 are also designated low-income environmental justice populations. None of the three census tracts within 1 mile of the proposed Compressor Station 2 are designated minority environmental justice populations.”⁸

At the Nov. 9, 2018, CS 2 Air Permit Public Hearing, after extensive reporting on DEQ Air Division’s compliance with EPA air emissions standards, Director Mike Dowd and permit writer, Pat Corbett presented the following table with their CS 2 site population number. Although carefully complying with air standards, they did not comply with EPA environmental justice review standards – their population cell reports Buckingham’s average census followed by number with no source.

<i>Monitor Station Location</i>	<i>2014 NEI (tons NOx)</i>	<i>2014 NEI (tons CO)</i>	<i>2014 NEI (tons PM2.5)</i>	<i>2014 NEI (tons PM10)</i>	<i>County Pop.</i>	<i>Pop. per Square Mile</i>
<i>(Project Site)</i>	<i>540</i>	<i>4,057</i>	<i>440</i>	<i>1,834</i>	<i>17,048</i>	<i>29.6 / 52.6</i>

⁷ EPA-Final Guidance for Incorporating EJ Concerns in EPA’s Compliance Analysis

<https://www.epa.gov/sites/production/files/2015-04/documents/ej-guidance-nepa-compliance-analyses.pdf>: P. 15-21; 35)

⁸ FERC FEIS 4.9.9.1. Demographic and Economic Data, P. 4-512

In taking questions from the Air Board, the following exchange may found in the transcripts, published on the deq.virginia.gov website, when Board member, Nikki Rovner requests DEQ's demographic analyses to be clarified:

MS. ROVNER: Mr. Dowd, what can you tell me about the demographics of Union Hill? I'd like to know about the community. I'd like to know about the race, the age distribution, anything you know about the health status of the community. I'd like to know about how those compare to the county and how those compare to the state, and I'd also like to know the density of the community as compared to the county.

MR. DOWD: I'm not sure we can answer all of those questions right here on the fly, but we have some of the information for you, Ms. Rovner.

MR. CORBETT: So one of the difficulties is knowing the exact details of the location. The informal survey, if you just base it on the informal survey, within a 1.1-mile radius, it's 85 percent African-American. As you heard yesterday, if you go out - and these are unsubstantiated, you know -- they're informal surveys, not --

MS. ROVNER: So just to be clear, DEQ did not conduct the surveys?

MR. CORBETT: No. We have the ability to go to a program that EPA puts out, called EJSCREEN. It's a screening mechanism. It's not -- I wouldn't really rely on it.

But if you look at that, the numbers are closer to the state average. The demographics within a 5-mile radius of the site. It's roughly, according to EJSCREEN, again, not DEQ's data, but EJSCREEN, is approximately 38 percent minority, and the state average I think is 37.

It's right in the straight-on average. EJSCREEN has a list of information, too, about under age 35 was half of the state average.

Let me pull it up. I had done this review some time ago, and I went back and had to look at it again. The five-mile radius, obviously, the area of the circle is more than that. The, you know, population density is about 16 people per square mile. So, you know, the data, when you get into such a rural area, isn't really refined to that level, so if you rely on the informal survey, what was submitted, 1.1 miles is right tight.

But how far out is far enough is kind of a question that, you know, we have to ask ourselves in looking at EJSCREEN, there are no clear issues and clear EJ communities.

They actually list -- EPA has, you know, data analysis, and they look at the ambient air in the area, truck data, Superfund sites, water quality, all of these different statistics or metrics that they put up there in relation to the demographics in a given region.

And when we look at that, which is the only third-party tool that we have available, there are no issues in that area.”⁹

One of the immediate ramifications of using census tract in lieu of accurate demographic data is from PHMSA – Pipeline and Hazardous Materials Safety Administration and its uses in class location designations:

⁹ Transcript, Air Pollution Control Board Meeting, Nov. 9 (Day 2), P.59: www.deq.virginia.gov

“A greater number of people in proximity to the pipeline substantially increase the probabilities of personal injury and property damage in the event of an accident. ... In addition, class locations are considered in determining the frequency of patrolling of transmission lines to observe surface conditions on and adjacent to the transmission line right-of-way and, in conducting leakage surveys.”¹⁰

Class designations based on population density determine pipeline thickness, hence protectiveness, and also the distances allowed between shut-off valves. An average persons per square mile census tract data for Buckingham of 29.6 people stood in for the demographic data used to determine PHMSA class designation for the ACP at the CS 2 site.

This we know because the valve shut-off valve distance at the Buckingham compressor station, if built, is 14.7 miles between mile-marker 191.6 and 206.3.¹¹ Mile-marker 191.6 is the metering and regulatory station - M&R station where the existing Transco’s 4 pipelines would intersect with the new ACP. Both are 42” interstate unconventional gas pipelines that would be allowed to operate at highest and lowest allowed psis of pressure. Uniquely, this M & R station at CS 2 would regulate the direction and pressure of Transco and ACP pipelines bi-directionally. Yet, there the shut off valve distance is to be one of the furthest apart of the entire proposed ACP corridor.¹²

Union Hill Household Study Methods and Tools to “Populate” CS 2 Impact Area

The household study started with a clear end-date and goal: to accurately populate the CS 2 impact area that had been de-populated through use of an average person per square mile census tract number to stand in for the actual number of people living in what we learned were 99 households in a 1.1 mile radius. We knew there were a lot, as a drive by reveals that. Our first goal then was to gather enough statistically significant evidence to present in expert public comments about the special use permit for CS 2 for an A1 Agricultural Zone exemption at public hearings held by the Buckingham Planning Commission on Sept. 26 2016, and later at the Board of Supervisors on January 5, 2017.

Based on identifying first what we needed to uncover, the process required translation into the research tools needed to design the most effective research when we had two months. Because my professional action anthropology career spanned 22 years, I could discard those methods that would not work under time duress. What would work, and more effectively than any other prior community research study I had undertaken, is to use a community participatory action approach (CPAR).¹³ As such, the 2-person teams would be led by a senior resident of Union Hill, who would be the one talking to household members, and a scribe, one of our University of Virginia student volunteers from VSEC (Virginia Student Environmental Coalition).

CPAR project findings are touted for being far more accurate in their findings because the person who shows up at the door when opened is someone who may be your neighbor or in your church group. Rather than being a limitation because of “subjectivity,” the “situated role” of the team leader

¹⁰ <https://www.phmsa.dot.gov/regulations/title49/interp/PI-81-001>

¹¹ FERC FEIS (7-21-17): Table 2.1.2-3 Valves for the Atlantic Coast Pipeline and Supply Header Project, P.2-10

¹² FERC FEIS Table 2.1.2-2 M&R Stations for the Atlantic Coast Pipeline and Supply Header Project, P. 2-8

¹³ For two examples in New York City: Morris Justice Project: <http://morrisjustice.org/#/id/i9056772>; The Youth Researchers For a New Education System Project: Eve Tuck, Maria Bacha, Irving Morales, Nzhingha Nkhrumah, Ludwige Saintus, Teresa Ann Willis, and Joanna Vogel [http://publicscienceproject.org/youth_researchers/]

leads to far greater response rates and accuracy. Because the household resident knows that their neighbor actually knows how many people live there (or visit regularly), knows your racial identity, knows your ages approximately, and has some sense of your family history, the responses can be far better counted on for accuracy than, say, to a census taker.

Critiques of census tract data for anything but the most broad-stroked demographic information concern the outsider role of the census-taker and lack of credibility then of the “self-reported data” they receive, as noted in NEPA guidelines above.

The proof lies in our study’s 76% response rate that is truly remarkable. No household when asked refused to participate. The only determining factor in households for which we have existing health conditions data and those we do not, was time. The time of the team leader to go again if asked to a household, the time of the resident available to give when asked to participate.

Using a door-to-door household participation method is the single most effective way to reach the largest numbers of residents in direct action research and most particularly important to inclusion of as many residents as possible for demographic accuracy. In 2015, Friends of Buckingham’s Chad Oba, Kenda Hanuman, Annie Parr, and Adrian Jones went door-to-door to inform the people who lived on all three roads that encircle the 68.5-acre site that Dominion changed their plans to now locate their Virginia compressor station in their midst, and let them know how they could get involved in meetings. Residents’ familiarity with us coming to their doors as our method of engaging their participation is a huge research response rate advantage. For, Union Hill is in a place where it was -- for long-term race discrimination reasons -- understandably unlikely for residents to answer the door to strangers, especially if thought to be representatives of government, including census takers.

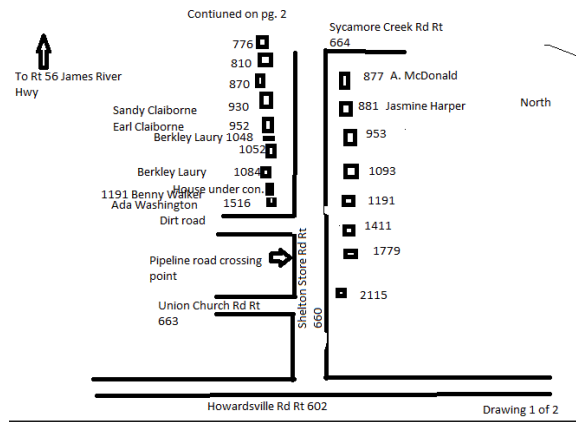
All students of recent elections and veteran grassroots organizers know that if you want to be effective in community engagement and recruit membership, you have to knock on people’s doors and take time to talk face-to-face. However, attention to cultural appropriateness requires community knowledge or the practice will backfire. Involving respected senior members of a local community is always key. This door-to-door method of reaching out to the residents of Union Hill by Friends of Buckingham became a local commonplace over the two years we used that technique in our community participatory demographic research project.

The research tools were only effective because they were refined in collaborative dialogue with Union Hill residents during field-testing in workshops at Union Hill Baptist Church and Union Grove Missionary Baptist Church, the two historic black churches in the community. The draft components questionnaire I wrote went through many revisions when long-time residents tried them out on each other. The questionnaire would have been far less effective a means of data gathering without their fine-grained analyses integrated into better ways of going about asking and talking about what we needed to know (attached please find the questionnaire used and script for team leaders to write in their own words). Even after our first foray on the ground, we made necessary changes based on participants’ honest feedback.

Our study questionnaire states in all caps that the scribe must not write down any names used by participants when responding with health data, with age range data, or any part except about local history and gravesites (so we could contact them to visit these sites). This is to adhere to NIH protocols to protect the confidentiality of medical information, to protect their rights to privacy, and the protection of children. In Union Hill, there was expressed a strong concern about attaching racial

identity with a particular address (interesting in terms of census taking). Each name & address was assigned a code on each completed questionnaire. That code was what I then connected with the data I entered in the columns and cells of the community study google sheet. The list of codes linked to their name/address is accessible only to me and kept in a secure location. This de-linking of personal information from data outcomes allows for the ethical sharing of data to vetted third parties.

Before we could begin the actual door-to-door scheduling, we needed organizing tools to ensure we included all households in the project area. We hand-drew separate section maps with addresses to send out with team assignments. These we created by driving and stopping to record each US postal service rural blue address post.



The study area is mapped by the three roads that form a triangle around the triangular-shaped 68.5-acre CS 2 property: Rt. 56-South James River Highway; Rt. 663 Union Hill Road; and Rt. 663 Shelton Store Road. W 663 / Woods Road is the name for 663 after crossing S. James River Highway. Two auxiliary roads/spurs complete the radius: both intersect Shelton Store Road: Sycamore Creek Rd. and Wooten Rd.

Site area is based on a 1.1-mile radius of the CS 2 site property on all sides. When the source is a compressor station and not a pipeline the impact area extends out 360 degrees in every direction in a radius. In setting the study area for the household project, I did not arrive at a 1.1-mile radius arbitrarily, although its cultural congruence was a helpful outcome once we'd completed the history and door-to-door phases. I was very well aware that NEPA guidelines often use the measure "1-mile impact area" from the source or the infrastructure site. On P. 10 above, FERC uses a 1-mile measurement: "None of the three census tracts within 1 mile of the proposed Compressor Station 2 are designated minority environmental justice populations."

Because Friends of Buckingham was not given Consulting Party status by FERC when requested, nor was Preservation Virginia, we are not given construction details for the CS 2 site. Therefore, when the applicant uses a specific number distance in relation to some part of this complex of facilities and pipelines intersecting underground to an unnamed household as "nearest" at "1450ft," there is no way to verify that statement because the source data is made inaccessible.

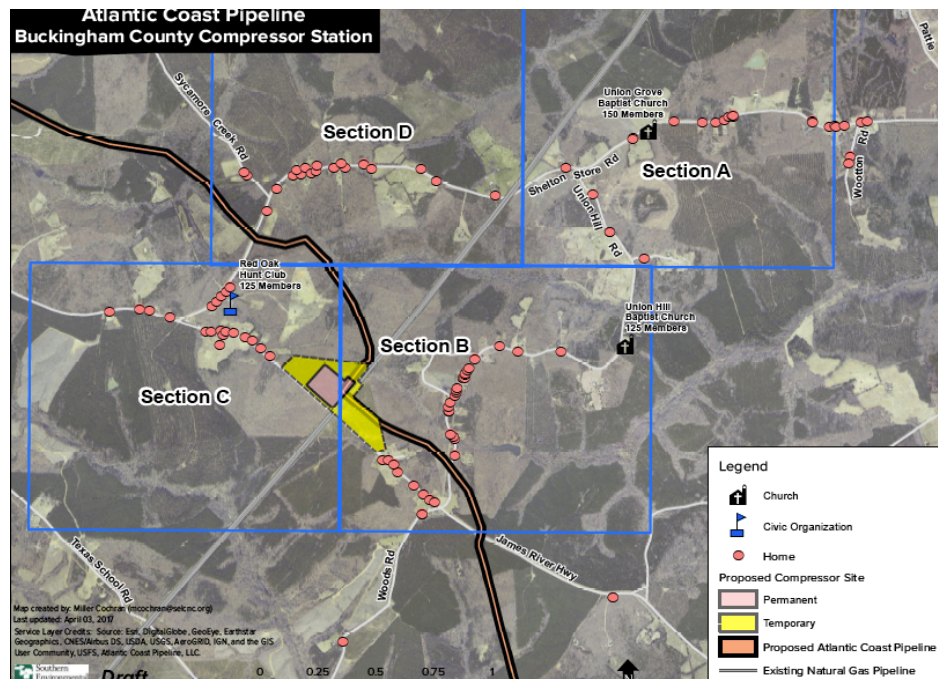
Our study research confirmed over time what we thought was true just from knowing the people from the churches and Friends of Buckingham meetings. When we drove the roads and stopped at each household surrounding the site, we were also driving a culturally congruent community. The shared history we uncovered was a history of slave plantation heritage including both people whose ancestors were buried in the nearby Confederate graveyard in the woods near Shelton Store Road,

and also whose ancestors were likely buried in the 100+ unmarked slave burial grounds located on the property still owned by descendants of Variety Shade Plantation owners. It was during the course of my historic research and a conversation with a relative now living in Baltimore that I learned of that burial site – long forgotten and now a point of great interest and future study by Union Hill’s freedmen descendants.

When a very large compressor station is sited right in the middle of culturally congruent community, and that community’s population is far larger than 29.6 people in a square mile radius, NEPA seeks race, income, and existing community health data to ensure it is not -- as has been historically the case – a community of color or impoverished community. That is why the EPA cites history, culture, existing health conditions, and so much more as necessary to a NEPA environmental justice review.

Therefore, to undertake a NEPA review that had not been done, the Community Study questionnaire includes queries for information on each of these components. In the case of Union Hill where it is likely the roots of their kinship interconnectivity go back to early Atlantic slave trade plantation days, no matter how many feet your individual home may be to the source, your nuclear and extended family and community are also in the impact zone, thereby increasing the health and economic losses to your family geometrically not linearly. These are people who drive each other to the doctors every week, as it is a medically underserved population. They have family reunions where 200 or 500 people come to visit the “home place.”

The Household Study map pasted below is the satellite view of the study area. It is made from the USGS map for the CS 2 once found at dom.com (now removed). On it, one sees the many clearings and households that lie on all sides. Using US Postal Service mailbox posts, SELC’s GIS expert filled in the red dots that mark those addresses.



99 densely clustered households, reached 76% = 199 weekday residents are 83% minority Af Am, Nat/Af Am, Nat/White, Hisp & Asian = 600+% more than ACP’s 29.6 persons per sq. mile; up to 500 more on weekends & reunions.(Map: ACP CS 2 w/ USPS address layer, SELC; Door-to-Door Project, L.Fjord)

The project was undertaken over six months – from beginning of August to late December 2016; and over 4 months in beginning of April to beginning of September 2018. Most took place in intensive shorter periods within those dates. As updated household information came in, I would delete still-vacant houses, residents who had moved or died; added newborns. By Sept. 4, 2018, I had deleted 11 homes that appeared would never be inhabited again. The final date for new data entry was Sept. 4, 2018, in order to prepare the analyses and percentages for public comments on the air permit.

The demographic statistical results are found in the sheet pasted here that I, and many others, submitted to DEQ as part of our CS 2 Air Permit comments within time in the public comment period.

UNION HILL HOUSEHOLD STUDY (09-04-2018)

99 households were identified by US postal service markers in 1.1-mile radius of Atlantic Coast Pipeline Virginia compressor station site in Union Hill, Buckingham, VA. ACP used Buckingham's average census data - 29.6 persons per square mile. Teams reached **75 households** or **76.53% response rate**. 33% are known descendants of formerly enslaved people at nearby plantations.

Weekday residents of 75 households: **199**

Weekend, bi-monthly, and annual family reunion numbers add hundreds more frequent visitors.

Race by self-identification: Taken together minorities make up 83% of residents:

	African American	Native American and African American	White	Native American and White	Native American	Hispanic
Count	123	27	33	9	3	3
%	61.80904523	13.5678392	16.58291457	4.522613065	1.507537688	1.507537688

Weekday residents household ages: 32% are children; 25% elderly. Both age ranges mask actual ages disproportionately the very young and very old (age range used to protect confidentiality):

Age Range	0-5	6-18	18-21	22-40	41-65	65+	Unknown	Total
Count	28	36	5	36	43	50	1	199
%	14.070351	18.090452	2.5125628	18.090452	21.608040	25.12562	0.50251256	100

Health Data: For the 67 households where we were able to have extensive questionnaire time, **35 responded with pre-existing medical conditions** or **59.32% of reached households**.

Highest levels of existing diagnosed health conditions are for autoimmune conditions (asthma, allergies, multiple sclerosis, lupus) and lung/respiratory conditions (COPD, asthma, chronic bronchitis & pneumonia, congestive heart failure), circulatory conditions (heart disease and heart conditions) and diabetes -- all known to be caused by environmental toxins and exacerbated by them. Other conditions include arthritis, bipolar disorder, cancers (brain and breast cancer), epilepsy, kidney condition, migraines, light sensitivity, noise sensitivity, skin disease, and stroke.

Because it is only the demographic research findings that are disputed by those using census tract data, I am not including here our data from the other research questions integral to our study that

relate to family heritage and grave sites nearby, uses of their land for agriculture and domestic food production, and other existing businesses on their property.

Public Engagement with Union Hill

EPA guidelines are very clear about the need to perform inclusive community participation, especially in communities that are often under-represented in local government.¹⁴ Perhaps most impactful an effect of using demographic data that does not reflect the on-the-ground population is that it may, as in the case of Union Hill, foreclose all actions taken by the local government, FERC, And DEQ to perform required “public engagement with the impacted community.”

FERC engaged in no EO 12898 described practices in the case of Union Hill and its people related to the inclusion of impacted people. At no point has any permitting agency considered pre-existing health conditions, for example, which are vital to understanding impacts of new toxic pollution-emitting infrastructure on nearby residents. The guidance is to engage in “meaningful involvement” so that: “(1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; (2) the public's contributions can influence the regulatory agency's decision; (3) the concerns of all participants involved will be considered in the decision-making process; and (4) the decision-makers seek out and facilitate the involvement of those potentially affected.”¹⁵

The only, highly restricted, opportunity given by FERC to “potentially affected community members” from Union Hill to “participate in decisions about a proposed activity that will affect their environment or health” was a FERC public hearing in Farmville, Virginia, Prince Edward County. Speakers were given a number and taken into a separate room to make their public comment on the ACP DEIS. FERC neither held a public scoping meeting nor a DEIS public comment hearing in Buckingham County -- the only county on the ACP route with a proposed compressor station, an M&R station, and 5 pipelines to intersect underground within a 150 ft. of the closest property line, that of Ella Rose. DEQ did not hold a public meeting in Buckingham for the 401 Water Permit, and DEQ Air Division did not conduct any community engagement in Union Hill about the CS 2 air permit until after the permit had already been published for public comments. They held a public hearing in Buckingham on Sept. 26, 2018.

At these opportunities to make comments in public and in print, Union Hill community residents expressed concerns about their land values, already dropped deeply in value after ACP's decision to site CS 2 there. They expressed concerns about breathing and other existing health diagnoses and conditions exacerbated by toxic emissions, leaks and breaks in pipelines buried in the same aquifer from which they draw their 100% single source drinking water from individual wells. They spoke of the effects on their cattle, calves, orchards and gardens having to grow near a toxic polluting industrial facility in their quiet, rural community. They spoke of their families' long histories of large reunions in Union Hill and the two church's Homecomings each year. As you know, none of these comments were translated by FERC or DEQ into “information” considered vital to the CS air permit.

¹⁴ EPA-Final Guidance for Incorporating EJ Concerns in EPA's Compliance Analysis
<https://www.epa.gov/sites/production/files/2015-04/documents/ej-guidance-nepa-compliance-analyses.pdf>: P.28

¹⁵ FERC FEIS 4.9.9.1 Demographic and Economic Data, 4-514

As evidence for how many times I have submitted the demographic findings from the household study into the public record, I have listed these below, and which don't include Southern Environmental Law Center-SELC's submissions and dates.

Fjord, Lakshmi, Ph.D. 2015 – 2018. Written and Oral Public comments in the public record on the Union Hill Community Study data findings and other anthropological research

1. Buckingham Board of Supervisors, expert comment on ACP issues related to health, economics, jobs, race, and history, March 9, 2015, by mail.
2. FERC, intervenor, request for consulting party status, public comment, Union Hill Historic Preservation Act Section 106 violations by ACP, June 2, 2016, submitted online
3. FERC, intervenor, request for consulting party status, public comment, Yogaville Historic District, HP Section 106 issues by ACP, June 2, 2016, submitted online
4. Advisory Council on Historic Preservation, John Eddins, with Preservation Virginia's Justin Sarafin and Sonja Ingram, Aug. 5, 2016, online and received lengthy response in FERC DEIS. (ACHP took the rare step of intervening *before* FERC permitting to point out egregious lack of information for Buckingham, requested we be allowed Consulting Party status.
5. Buckingham County, Planning Commission, Sept. 9, 2016
6. Buckingham County, Board of Supervisors, Special Use Permit Public Comment period and hearing, January 3, 2017.
7. FERC DEIS Public Hearing, Farmville, VA, April 4, 2017, oral and written
8. FERC DEIS Written public comment for Yogaville Historic District filed April 6, 2017; submitted online at FERC.
9. FERC DEIS Written public comment for Union Hill Environmental Justice Coalition, April 8, 2017, submitted online at FERC
10. VDEQ 401 Water Permit Public Comment filed August 22, 2017; emailed and sent by mail.
11. VDEQ 401 Water Permit Public Hearing, Farmville, VA, August 10, 2017; in person.
12. FERC: Motion for Rehearing ACP, factual errors on Union Hill including missing demographic data, historic cultural data, actual existing losses of property values, and more. Nov. 13, 2017, intervenor, submitted online
13. Virginia Water Control Board, NW 12 technical comment, June 15, 2018, submitted online and by USPS mail
14. FERC: VDEQ NW 12 Comment of Lakshmi Fjord, PhD, Friends of Buckingham under CP15-554-000. Virginia Water Control Board NW 12 technical comments, incl erasures of actual populations impacted by Virginia ACP compressor station in Union Hill and James R HDD crossing, submitted online June 21, 2018, intervenor
15. VDEQ Buckingham Compressor Station Air permit, public hearing, Sept. 11, 2018
16. VDEQ Buckingham Compressor Station Air permit public comment, Sept. 21, 2018.
17. State Air Control Board Public Hearing on Compressor Station Air Permit, Nov. 8, 2018

Respectfully submitted,
Lakshmi Fjord
December 14, 2018

Code: _____ **Proposed Buckingham Compressor Station Residents' Questionnaire**

Date: _____ Friends of Buckingham: www.friendsofbuckinghamva.org

Hi, my name is _____ and this is _____ who's from _____ [refer to script = why here]

If you don't have time now, when can we return? _____; May we call to set a time? _____; when: _____
[return to script/your version = what these facts are for] **NO NAMES IN DEMOGRAPHIC DATA**

1. How many people live here? _____
2. How many are children age 0 – 5? _____ > please give specific ages: _____
3. How many are children age 6 – 18? _____ > specific ages _____
4. 18 – 21? _____
5. 22 – 40? _____
6. 41 – 65? _____
7. How many are age 65 and older? _____; please give specific ages: _____
8. How many who visit often are young children? _____; please give specific ages
9. Frequent visitors ages 65 and older? _____; please give specific ages
10. Do any of these have a permanent disability? _____; ages of each disabled person: _____
11. Does anyone in your family have lung, heart, or other illnesses that air pollution would make worse?
Specific conditions faced by what specific age person - no names:
12. Do you use the land for any farming? Fruit & nut trees? Gardening? Raising animals? Specifics:
13. Do you have a business here whose operations may be harmed by the construction phase of the
compressor station? Please describe:
By its air emissions after built? Why? By the traffic on the roads? Why?
14. Do you have a family history here even if you were not born in Buckingham?
How far back does it go?
15. How far back does it go? _____ Do you know if your folks were Freedmen?
16. FoB is working with Mr. Charles White, would you prefer he asks you? _____
17. If back to plantation and Freedmen times, this is very important for our historic register project for both
black and white families, so please describe what you wish to share on this:
18. Is there anyone else in the family or friends who we could also ask about this? Contact info:
19. Do you have family buried in any Buckingham cemeteries? _____; Which ones?
20. Do you have a family history here even if you were not born in Buckingham? gravesites, a cemetery or
unmarked graves on your land? _____
21. May we come back with Mr. White or Preservation Virginia to photograph these? _____
23. To have accurate race data, please tell us what race(s) they and their family members identify as:

Name of Resident: _____ Renter? ___ Owner Name? _____

Street Address: Mailbox # _____

Resident's signature(s) _____

Contact Phone(s): _____

Contact Email(s): _____

After we record your participation, all personal information is removed from this record, which will be
coded for confidentiality.

Household Questionnaire 2-Person Team Handout: 1 Community member, 1 recorder
Write In Check Sheet: Fill blanks with your ideas

General Best Practices:

*Let the community member be the leader. Try to draw residents out instead of telling them many things. Give handouts on compressor stations if they want them. If they ask, say just a few high points to engage their interest.

*If you don't know the answer to a question, write it down and then flag to respond.

*Try to write down exactly what they say. Scribe, you can ask them to slow down.

*Flag surveys of people you think we should videotape!

1. Introduce yourselves; why are we here?

2. Is it a good time to talk for about ½ hour? If not, when?

Note return needed on the survey after name, address & contact method is filled in.
Separate out GO BACK TO from DONE surveys when handed in.

3. What to say about health questions that include # of people, ages, race?

4. What to say about why we want to know their concerns about the compressor station?

5. Why important to learn about their present uses of this land or historic uses:

6. Importance of gravesites on property? Or nearby?

7. Importance of land use for agriculture and growing food?

8. Why sign up on separate sheet for Friends of Buckingham mailing list? To get updates on:

*Compressor Station Air Permit Public meetings – Planning Commission and then Board of Supervisor meetings where they can make their feelings known to the County

*Well water testing project

*Activities and meetings